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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,216	02/14/2006	Frans Johan Sarneel	19790006US1CER030018	6282
26191 7590 02/02/2009 FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER TOUSSAINT, DALILA	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 02/02/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/568,216	Applicant(s) SARNEEL ET AL.	
	Examiner DALILA TOUSSAINT	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/03/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-4, 6, 9, 11-23, and 26-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sarneel US publication 2002/0037351 A1**, and further in view of **Takashima US publication 2001/0055638 A1**.

a. Referring to claim 1-2, 13, 16, 19, 27, Sarneel disclose a composition in bakery products consisting of 5-30% w/w starch n-alkenyl succinate and 0-50% w/w starch (Sarneel; ¶ 0029). Wherein the starch used may be from corn (waxy maize) and unmodified (native) (Sarneel; ¶ 0032). Sarneel teaches the addition of eggs to the composition at claim 6, ¶ 0017 and ¶ 0028 (see also ¶ 0008) wherein the reference teaches: "Simultaneous reduction of cholesterol content by

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complete or partial replacement of whole egg is an additional advantage”.

However, Sarneel is silent to the dry composition containing 10-30% whey protein.

Takashima disclose several embodiments wherein protein substitutes are used (Takashima; examples 1-2 and 6) within a range between 30 and 80% by weight, based on the amount of starch (Takashima; ¶ 0027). Also, Takashima disclose “the thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein.” (Takashima; ¶ 0026)

Regarding the dough batter product of Sarneel, it would have been obvious to one of ordinary skill in the art the time the invention was made to use whey protein as taught by Takashima and suggested by Sarneel, that is, the replacement of eggs in part or whole in order to reduce cholesterol. One would have been motivated to add whey instead to maintain the swollen state of the sponge cake and to prevent bake shrinkage (Takashima; ¶ 0026). Furthermore, Takashima teaches these proteins as functional alternatives.

Regarding the composition of Sarneel and the instant claims, they differ in that Sarneel does not teach the exact same proportions of starch n-alkenyl succinate and unmodified starches as recited in the instant claims. It is apparent, however, that the instantly claimed ranges and that taught by the references are so close to each other that the fact pattern is similar to the one in *In re Woodruff*

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919 F.2d 1575, USPQ2d 1934 (Fed. Cir.1990) or Titanium Metals Corp. of America vs. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties". In the instant case, note that Sarneel in fact teaches a lower starch n-octenyl succinate composition. To adjust such a composition, with the same intent, which is, to obtain a product with good mouth feel would have been within the realm of the skilled artisan.

b. Referring to claim 3, 14, 17, and 28-29, Sarneel and Takashima disclose an untreated (unmodified) maize starch (Takashima; ¶ 0019 and Sarneel; ¶ 0032).

c. Referring to claim 4, Sarneel disclose a dry composition, characterized in that starch n-octenyl succinate is selected from thinned, undextrinized, dextrinized, cooked-up, pregelatinized, and stabilized starch n-octenyl succinate and mixtures of two or more (Sarneel; ¶ 0037).

d. Referring to claim 6, 12, 18, 20, and 23, Sarneel disclose a liquid composition for use in bakery products comprises water, optionally, one or more flavoring, colorant, vitamin, and/or mineral (Sarneel; example 1).

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e. Referring to claim 9, Sarneel disclose a dough or batter mixture for use in preparing a bakery product comprising a dry composition or liquid composition, together with one or more additional ingredients (Sarneel; example 1).

f. Referring to claim 15, Sarneel disclose a dough or batter mixture for use in preparing a bakery product selected from the group consisting of pound cake, sponge cake, and gingerbread (Sarneel; ¶ 0037).

g. Referring to claim 21 and 30, Sarneel disclose a process of baking the dough is carried out at a temperature in the range 140-190 °C (Sarneel; ¶ 0070). Sarneel is silent to baking at the temperature of 160 °C, however, to find optimum working temperatures within a disclosed set of ranges is prima facie obvious.

h. Referring to claim 22 and 31, Sarneel and Takashima disclose a process of baking the dough in a receptacle (Sarneel; ¶ 0069 and Takashima; ¶ 0061). Sarneel and Takashima are silent to a non-coated iron, however, it is notoriously well known in the bakery art to bake goods in iron pans, whether coated or non-coated. One would have been motivated to do so in order for the baked product to maintain its shape and the iron receptacle will even the heat distribution of the bake product while in the oven.

i. Referring to claims 11 and 26 Sarneel teaches:

(1) A dough or batter mixture for use in preparing a bakery product characterized in that it comprises: 10-15 %w/w flour; 4-12 %w/w starch n-alkenyl succinate, 0-10 %w/w egg and 0-5 %w/w emulsifier (Sarneel; ¶ 0040).

Wherein, the dough or batter mixture, characterized in that the untreated starch is untreated maize starch (Sarneel; ¶ 0031-0032).

Sarneel teaches the addition of eggs to the composition at claim 6, ¶ 0017 and ¶ 0028 (see also ¶ 0008) wherein the reference teaches: "Simultaneous reduction of cholesterol content by complete or partial replacement of whole egg is an additional advantage". However, Sarneel is silent to the dough mixture composition containing 0.1-7 %w/w whey protein.

Takashima disclose several embodiments wherein protein substitutes are used (Takashima; examples 1-6) within a range up to 15% by weight of the dough composition. Also, Takashima disclose "the thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." (Takashima; ¶ 0026)

Regarding the dough batter product of Sarneel, it would have been obvious to one of ordinary skill in the art the time the invention was made to use whey protein as taught by Takashima and suggested by Sarneel, that is, the replacement of eggs in part or whole in order to reduce cholesterol. One would have been motivated to add whey instead to maintain the swollen state of the sponge cake and to prevent bake shrinkage (Takashima; ¶ 0026). Furthermore, Takashima teaches these proteins as functional alternatives.

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4. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sarneel US publication 2002/0037351 A1, Takashima US publication 2001/0055638 A1** and further in view of **Gisaw et al. US patent 6558730 B1**.

j. Referring to claim 5, Sarneel and Takashima fail to disclose the starch n-octenyl succinate as derived from high amylopectin source.

However, Gisaw disclose using a number of different starches within its dough preparation, such as the dry mix in example 1, contains raw corn (untreated) starch and modified starches (Gisaw; columns 8-9). Gisaw disclose in addition to it modified starches such as waxy corn starch (which has high amylopectin) (Gisaw; column 8, line 37) the use of starch octenyl succinate and mixtures thereof.

It is quite common to include starch-based materials in the dough compositions of fabricated snacks. Typically, ingredients such as dried potato products are used in combination with a high amylopectin and/or pregelatinized starch. The high amylopectin starch and/or pregelatinized starch is used to provide a dough having desired performance properties (e.g., cohesive, non-adhesive, continuously sheetable) (Gisaw; column 1, line 28-35 and column 9, line 10-19). It would have been obvious to one of ordinary skill in the art the time the invention was made to use varying mixture of starches as taught by Gisaw. One would have been motivated to do so to improve the visco-elastic properties of the dough which are important for obtaining the desired internal structure as

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well as the final texture of the snack (Gisaw; column 4, line 43-45) while at the same time provide a dough which produces an acceptable snack when fried.

5. **Claims 7, 10, and 24-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takashima US publication 2001/0055638 A1, Sarneel US publication 2002/0037351 A1**, and further in view of **Ekanayake et al. US patent 6056984**.

k. Referring to claim 7, 10, and 24-25, Sarneel and Takashima disclose a dry composition and a water-miscible liquid composition, wherein the references disclose several embodiments as shown throughout their examples. However, Sarneel and Takashima are silent to the ratio/ percentages of dry composition to the liquid composition. However, Ekanyake disclose a general range of ingredients (based on weight of the total composition) for flour based doughs and batter are as follows: 10%-70% flour and 5%-90% total water (Ekanyake, column 9, line 11-20).

Thus, to choose a specific combination of dry composition to liquid composition would be within the ordinary ingenuity of one of ordinary skill in the art and would depend on the desired characteristics for the bakery product.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-4, 9, 11, 15-17, and 26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 8 and 17 of U.S. Patent No. 6663909 B2 in view of U.S. Publication No. 2001/0055638 A1.

I. Sarneel teaches a bakery product selected from the group consisting of pound cake, sponge cake, and gingerbread (Sarneel; claim 8).

Wherein, the dough or batter mixture for use in preparing a bakery product characterized in that it comprises: 20-65 %w/w flour; 1-21 %w/w starch n-alkenyl succinate, 15-40 %w/w egg and 0-10 %w/w emulsifier (Sarneel; claim 17).

Wherein the starch n-alkenyl succinate is selected from the group consisting of undextrinized, dextrinized, cooked-up, pregelatinized, stabilized and mixtures of two or more thereof (Sarneel; claim 4).

Wherein, the dough or batter mixture, characterized in that the untreated starch is untreated flour/starch (Sarneel; claim 8). However Sarneel is silent to

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untreated maize starch. Takashima disclose the use of unmodified corn starch (Takashima; ¶ 0019).

Also, Sarneel is silent to the bakery product containing 0.1-6 %w/w whey protein. However, Takashima disclose several embodiments wherein protein substitutes are used (Takashima; examples 1-6) within a range up to 15% by weight of dough composition.

Sarneel disclose a dry composition for use in bakery products that contains 0-50% w/w starch and 5-30 % w/w n-alkenyl succinate (claim 1). However is silent to 10-40 %w/w whey protein. Takashima disclose several embodiments wherein protein substitutes are used within a range between 10 and 120% by weight (Takashima; ¶ 0027) in combination with carbohydrates such as modified and unmodified starches (Takashima; ¶ 0019-0020). Also, Takashima disclose "the thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." (Takashima; ¶ 0026)

Regarding the dry composition of Sarneel, it would have been obvious to one of ordinary skill in the art the time the invention was made to use the untreated starch and whey protein as taught by Takashima. One would have been motivated to do so to maintain the swollen state of the sponge cake and to prevent bake shrinkage (Takashima; ¶ 0026). This leads the claims of 6663909 B2 in view of Takashima et al to render the instant application claims obvious.

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Regarding the dry composition percentage starch n-octenyl succinate of Sarneel and the instant claims differ in that Sarneel does not teach the exact same proportions as recited in the instant claims. It is apparent, however, that the instantly claimed ranges and that taught by the references are so close to each other that the fact pattern is similar to the one in *In re Woodruff* 919 F.2d 1575, USPQ2d 1934 (Fed. Cir.1990) or *Titanium Metals Corp. of America vs. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties". In the instant case, note that the reference in fact teaches a lower starch n-octenyl succinate composition. To adjust such composition, with the same intent, which is, to obtain a sponge cake with good mouth feel would have been within the realm of the skilled artisan.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DALILA TOUSSAINT whose telephone number is (571)270-7088. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. SAYALA/

Primary Examiner, Art Unit 1794

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